

REMARKS

In the Office Action, the Examiner noted that claims 1-8 and 12-16 are pending in the application and that claims 1-8 and 12-16 are rejected. By this response, claims 1-8 and 12-16 continue without amendment. In view of the following discussion, the Applicant submits that none of the claims now pending in the application are anticipated under the provisions of 35 U.S.C. §102 or obvious under the provisions of 35 U.S.C. §103. Thus, the Applicant believes that all of these claims are now in condition for allowance.

I. Rejection of Claims under 35 U.S.C. §102

The Examiner rejected claims 1-7, 12, and 14-15 as being anticipated by Akram (U.S. Patent 6,529,027, issued March 4, 2003). The rejection is respectfully traversed.

More specifically, the Examiner stated that Akram teaches an interposing structure within an integrated circuit package that couples a first micro-bump of an array of micro-bumps on a die to both a first landing pad and a second landing pad in an array of landing pads on the package. (Office Action, pp. 2-3) (citing FIG. 3). As shown in FIG. 3 of Akram, however, the interposing substrate does not couple a single micro-bump 152 to a pair of landing pads (contact pads 102). Rather, the micro-bumps 152 of Akram are electrically coupled to the contact pads 102 in one-to-one fashion. (Akram, col. 7, lines 33-53; FIG. 3). That is, any one micro-bump on the die in Akram is only coupled to a single contact pad. In contrast, Applicant's claim 1 recites an interposer that couples a "first micro-bump in a first position in the array of micro-bumps to a first landing pad located opposite to the first position and to a second landing pad in the array of landing pads." Akram is devoid of any teaching or suggestion of an interposer that couples one micro-bump to a pair of landing pads.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim."

Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 221 USPQ 481, 485 (Fed. Cir. 1984). Since Akram does not teach an interposer that couples one micro-bump to a pair of landing pads, Akram does not teach each and every element

of Applicant's claim 1 as arranged therein. Accordingly, Wang does not anticipate Applicant's invention recited in claim 1.

Claim 12 includes features similar to those of claim 1 emphasized above. For the same reasons set forth above, Applicants contend that Akram does not anticipate the invention of claim 12. Claims 2-7 and 14-15 depend, either directly or indirectly, from claims 1 and 12 and recite additional features therefor. Since Akram does not anticipate Applicant's invention as recited in claims 1 and 12, dependent claims 2-7 and 14-15 are also not anticipated and are allowable. Therefore, Applicant contends that claims 1-7, 12, and 14-15 are not anticipated by Akram and, as such, fully satisfy the requirements of 35 U.S.C. §102.

II. Rejection Of Claims Under 35 U.S.C. §103

A. Claim 16

The Examiner rejected claim 16 as being unpatentable over Akram in view of Berlin (U.S. Patent 6,104,082, issued August 15, 2000). The rejection is respectfully traversed.

Claim 16 depends from claim 12 and recites additional features therefor. The cited references, either singly or in any permissible combination, do not teach, suggest, or otherwise render obvious Applicant's invention recited in claim 12. Namely, the cited combination does not teach or suggest an interposer that couples one micro-bump to a pair of landing pads. As described above, Akram is devoid of such a teaching. Berlin generally teaches a tailorable metallization level between a first set of pads and a second set of pads. Berlin does not teach or suggest an interposer that couples one bump contact to a pair of landing pads. Thus, no conceivable combination of Akram and Berlin renders obvious Applicant's invention of claim 12. Therefore, Applicants contend that claim 16, which depends from claim 12, is patentable over Akram and Berlin and fully satisfies the requirements of 35 U.S.C. §103.

B. Claims 7 and 13

The Examiner rejected claims 7 and 13 as being unpatentable over Akram in

view of Vafi (U.S. Patent 5,474,458, issued December 12, 1995). The rejection is respectfully traversed.

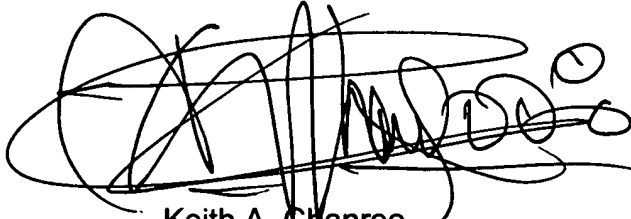
Claims 7 and 13 depend from claims 1 and 12 and recite additional features therefor. The cited references, either singly or in any permissible combination, do not teach, suggest, or otherwise render obvious Applicant's invention recited in claims 1 and 12. Namely, the cited combination does not teach or suggest an interposer that couples one micro-bump to a pair of landing pads. As described above, Akram is devoid of such a teaching. Vafi generally teaches an interconnect carrier for coupling integrated circuit chips to substrates. Vafi does not teach or suggest an interposer that couples one bump contact to a pair of landing pads. Thus, no conceivable combination of Akram and Vafi renders obvious Applicant's invention of claims 1 and 12. Therefore, Applicants contend that claims 7 and 13, which depend from claims 1 and 12, are patentable over Akram and Vafi and fully satisfy the requirements of 35 U.S.C. §103.

CONCLUSION

Thus, Applicant submits that none of the claims presently in the application are anticipated under the provisions of 35 U.S.C. §102 or obvious under the provisions of 35 U.S.C. §103. Consequently, Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring any adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Keith A. Chanroo at (408) 879-7710 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

A large, stylized handwritten signature in black ink, appearing to read 'Keith A. Chanroo'.

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on October 5, 2006.

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Signature